

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A therapeutic liposome composition comprising reagents for use in preparing a therapeutic liposome composition sensitized to a target cell, said reagents comprised of comprising

(a) a liposomal composition composed of ~~pre-formed~~ liposomes having an entrapped therapeutic agent; and

(b) a plurality of conjugates, each conjugate composed of (i) a lipid having a polar head group and a hydrophobic tail, (ii) a hydrophilic polymer having a proximal end and a distal end, said polymer attached at its proximal end to the head group of the lipid, and (iii) a targeting ligand attached to the distal end of the polymer;

wherein said ~~reagents~~plurality of conjugates form a micellular suspension that upon incubation with said liposomal composition ~~are mixed to~~ form the therapeutic, target-cell sensitized liposome composition.

2. (Original) The composition of claim 1, wherein the targeting ligand is an antibody or an antibody fragment.

3. (Previously presented) The composition of claim 2, wherein the antibody or antibody fragment is a humanized murine antibody.

4. (Original) The composition of claim 2, wherein the targeting ligand specifically binds to an extracellular domain of a growth factor receptor.

5. (Original) The composition of claim 4, wherein the receptors are selected from the group consisting of c-erbB-2 protein product of the HER2/neu oncogene, epidermal growth factor receptor, basic fibroblast growth factor receptor, and vascular endothelial growth factor receptor.

6. (Original) The composition of claim 2, wherein the targeting ligand binds a receptor selected from the group consisting of E-selectin receptor, L-selectin receptor, P-selectin receptor, folate receptor, CD4 receptor, CD19 receptor, $\alpha\beta$ integrin receptors and chemokine receptors.

7. (Original) The composition of claim 1, wherein the targeting ligand is selected from the group consisting of folic acid, pyridoxal phosphate, vitamin B12, sialyl Lewis^x, transferrin, epidermal growth factor, basic fibroblast growth factor, vascular endothelial growth factor, VCAM-1, ICAM-1, PECAM-1, RGD peptides and NGR peptides.

8. (Original) The composition of claim 1, wherein the targeting ligand binds a receptor on a malignant B-cell or T-cell, said receptor selected from the group consisting of CD19, CD20, CD22, CD4, CD7 and CD8.

9. (Original) The composition of claim 1, wherein the hydrophilic polymer is selected from the group consisting of polyvinylpyrrolidone, polyvinylmethylether, polymethyloxazoline, polyethyloxazoline, polyhydroxypropyloxazoline, polyhydroxypropylmethacrylamide, polymethacrylamide, polydimethylacrylamide, polyhydroxypropylmethacrylate, polyhydroxyethylacrylate, hydroxymethylcellulose, hydroxyethylcellulose, polyethyleneglycol, polyaspartamide and hydrophilic peptide sequences.

10. (Original) The composition of claim 1, wherein the hydrophilic polymer is polyethylene glycol.

11. (Original) The composition of claim 10, wherein the polyethylene glycol has a molecular weight between 500-5,000 daltons.

12. (Original) The composition of claim 1, wherein the liposomes further contain a cationic lipid.

13. (Original) The composition of claim 1, wherein the entrapped therapeutic agent is a cytotoxic drug.

14. (Original) The composition of claim 13, wherein the cytotoxic drug is an anthracycline antibiotic selected from the group consisting of doxorubicin, daunorubicin, epirubicin and idarubicin and analogs thereof.

15. (Original) The composition of claim 13, wherein the cytotoxic agent is a platinum compound selected from cisplatin, carboplatin, ormaplatin, oxaliplatin, zeniplatin, enloplatin, lobaplatin, spiroplatin, ((-)-(R)-2-aminomethylpyrrolidine (1,1-cyclobutane dicarboxylato)platinum), (SP-4-3(R)-1,1-cyclobutane-dicarboxylato(2-)-(2-methyl-1,4-butanediamine-N,N')platinum), nedaplatin and (bis-acetato-ammine-dichloro-cyclohexylamine-platinum(IV)).

16. (Original) The composition of claim 13, wherein the cytotoxic agent is a topoisomerase 1 inhibitor selected from the group consisting of topotecan, irinotecan, (7-(4-methylpiperazino-methylene)-10,11-ethylenedioxy-20(S)-camptothecin), 7-(2-(N-isopropylamino)ethyl)-(20S)-camptothecin, 9-aminocamptothecin and 9-nitrocamptothecin.

17. (Original) The composition of claim 13, wherein the cytotoxic agent is a vinca alkaloid selected from the group consisting of vincristine, vinblastine, vinleurosine, vinrodisine, vinorelbine and vindesine.

18. (Original) The composition of claim 1, wherein the entrapped agent is a nucleic acid.

19. (Original) The composition of claim 18, wherein the nucleic acid is an antisense oligonucleotide or ribozyme.

20. (Original) The composition of claim 18, wherein the nucleic acid is a plasmid containing a therapeutic gene which when internalized by the target cells achieves expression of the therapeutic gene to produce a therapeutic gene product.

Claims 21-56 (Canceled)

57. (Previously presented) A therapeutic liposome composition having sensitivity to a target cell, comprising

pre-formed liposomes having an entrapped therapeutic agent; and

one or more conjugates composed of (i) a lipid having a polar head group and a hydrophobic tail, (ii) a hydrophilic polymer having a proximal end and a distal end, said polymer attached at its proximal end to the head group of the lipid, and (iii) a targeting ligand attached to the distal end of the polymer;

wherein said pre-formed liposomes and said one or more conjugates are in individual containers prior to formation of the therapeutic liposome composition having sensitivity to a target cell.

58. (Previously presented) The composition of claim 57, wherein said conjugate is comprised of a vesicle-forming lipid, polyethylene glycol, and a targeting ligand having binding affinity for a cell surface receptor.

59. (Previously presented) The composition of claim 57, wherein said pre-formed liposomes include as the entrapped therapeutic agent doxorubicin.

60. (Previously presented) The composition of claim 58, wherein said pre-formed liposomes include as the entrapped therapeutic agent doxorubicin.